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Canada

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D119-646-243
Job Sheet 187551



Part No: D119-646-243

Job Qty: 1 ea

Part Name: AW119 Repl. Skidtube with Heavy Duty Wearplates, Float Compatible -Fits LH or RH



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 12/7/18

Job Tracking No:

Created By: Jesse White

Due Date: 1/25/19

Type: SOLD

Description:

Note: IIN-D119-646 REV D, D3905-045 REV.F IPP RevA: New issue DD verified by:EC IPP REV B 12.11.05 (DEOD3905-B-1)(ecn 12-675) DD verf:JLM IPP REV:C 13.03.20 per chg003 ECN13-534 DD verf:JLM IPP REV:D 15.01.19 AS PER ECN-14-628 DD verf:JLM IPP REV:E 16.11.02 chg as per D3905 revD(DEO) DD verf:JLM IPP REV:F 17.05.19 as per dwg D3905 rev.e DD verf:JFS

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea	1/25/19	1/25/19	0.00	0.00	Start Up Skid tubes-1		M6/15
110	Skid tubes	1 pcs	1/25/19	1/25/19	0.00	2.07	Skid tubes-1		D.R 18/12/12
120	HandFinish	1 pcs	1/25/19	1/25/19	0.00	1.05	HandFinish1		M6/15
130	QC	1 pcs	1/25/19	1/25/19	0.00	0.00	QC7-1		M6/15
150	Skid tubes	1 pcs	1/25/19	1/25/19	0.00	2.07	Skid tubes-1		M6/15
155	CNC Bend Skid tubes	1 pcs	1/25/19	1/25/19	0.00	1.20	CNC Bend Skid tube		M6/15
165	QC	1 pcs	1/25/19	1/25/19	0.00	0.00	QC5		BE
180	Skid tubes	1 pcs	1/25/19	1/25/19	0.00	2.07	Skid tubes-1		M6/15
190	QC	1 pcs	1/25/19	1/25/19	0.00	0.00	QC5		BE
200	CNC Bend Skid tubes	1 pcs	1/25/19	1/25/19	0.00	1.20	CNC Bend Skid tube		M6/15
210	Skid tubes	1 pcs	1/25/19	1/25/19	0.00	1.41	Skid tubes-1		M6/15
220	QC	1 pcs	1/25/19	1/25/19	0.00	0.00	QC5		BE
224	Skid tubes	1 pcs	1/25/19	1/25/19	0.00	3.70	Skid tubes-1		BE M6/15
225	QC	1 pcs	1/25/19	1/25/19	0.00	0.00	QC5		38 DAS
226	QC	1 pcs	1/25/19	1/25/19	0.00	0.00	QC10		9-89 38
227	HandFinish	1 pcs	1/25/19	1/25/19	0.00	1.05	HandFinish2		D.R 19/01/15
240	SprayPaint	1 pcs	1/25/19	1/25/19	0.00	0.56	Spray Paint		AR 19-1-17
242	Outsource	1 pcs	1/25/19	1/25/19			ATE003-VC	5	N/R
245	QC	1 pcs	1/25/19	1/25/19	0.00	0.00	QC14		HL 19-01-18
250	HandFinish	1 pcs	1/25/19	1/25/19	0.00	1.05	HandFinish4		HL 19-01-21
260	QC	1 pcs	1/25/19	1/25/19	0.00	0.00	QC5		AR 19-1-21
270	HandFinish	1 pcs	1/25/19	1/25/19	0.00	1.49	HandFinish4		AR 19-01-21
280	QC	1 pcs	1/25/19	1/25/19	0.00	0.00	QC5		JAN 22 2019 68
285	HandFinish	1 pcs	1/25/19	1/25/19	0.00	1.05	HandFinish3		HL 19-01-21 DAS
286	QC	1 pcs	1/25/19	1/25/19	0.00	0.00	QC5		JAN 22 2019 68
288	DC	1 pcs	1/25/19	1/25/19	0.00	0.00	DC		9-89 DAS 9-89
290	Packaging	1 pcs	1/25/19	1/25/19	0.00	0.00	Packaging3-1		DAS 69 JAN 22 2019
300	QC21-FG	1 Ea	1/25/19	1/25/19	0.00	0.00	QC21		21 9-89

Part Op 110 - 1- Inspect Mat'l D2500-1-190 for damage 2- Ensure squareness of ends

Plex 12/7/18 11:41 AM dart.white.jesse

Entered: _____ Date: _____

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE



NCR No. _____

Route update only ☐

Job: _____		DISPOSITION		DEPARTMENT/PROCESS							
Part No. _____	Date: _____	Rework ☐	Skid-tube ☐	Cross tube ☐	Eng. (Non-AW) ☐	Engineering ☐					
		Scrap ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Water Jet ☐					
				Finishing ☐	Rec/Store/Packaging ☐	Supplier Quality ☐					
						MRB (QSI042)					
						Completed By _____					
						Lead hand / Supervisor _____					
						QC / QA Coordinator _____					
				CATEGORY							
Operator ☐		Bending ☐		☐ Power Loss/Surge				☐ Positioned Wrong			
Manufacturing Process ☐		Crushing ☐		☐ Folio/Program				☐ Outside Tolerance			
Equip/Tooling ☐		Cracks ☐		☐ Grain Direction				☐ Drawing			
Handling/Preservation ☐		Crimp/Kink/Ripple/Wave/Twist ☐		☐ Weld				☐ Finish			
Material ☐		Marks/Chatter ☐		☐ Wrong Stock Pulled				☐ Part Lost/Missing			
Product Improvement ☐		Mislabeled ☐		☐ Out of Sequence				☐ Misread			
Process Improvement ☐		Other/Details: _____		☐ Off-set/Set-up							
Human Factors ☐											

DART 1
AEROSPACE
Container No: S136898
Part: D119 - 646 - 243
Job No: 187551
Serial No/Batch: S136898
Revision: D.F.
Inspector: _____
Exp Date: _____
Instructions: FAA STC SR02024SE 15/04/28, TFASTC LOA P-09-0407-RDIMS

7211 American Street
Haverhill, MA 01830
TEL: 978 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Description is: 120 - Chemical Conversion Coat per QSI005 4.1

130 - QC7-Inspect Chemical Conversion Coat

150 - 1- Install drill jig DT9480 drill all x-bolt spacer holes using 3/16 drill first side only. 2- 2nd side, locating from first saddle holes use DT9861 A/B to drill 2nd side fwd saddle holes. 3- 2nd side locating from fwd saddle drill remaining crossbolt spacer holes using DT9477 4- Scribe batch # inside aft end of tube

155 - 1- Bend AFT end of tube using CNC Bender 1 and bend prog. D3905 AFT as per dwg D3905. Must use bending Aid DT9538, located 23.25" from Aft end. 2- Ensure bending Aid DT9538 is positioned correctly, that the bender set up in on full wide and that the indexing ridge is covered with graphite grease.

165 - QC5- Inspect part completeness to step on W/O

180 - 1- Verify dimension of bend as per dwg D3905 2- Buff out marks left from bending. 3- Drill Aft Float bag holes using DT9493 as per dwg D3905 detail G and section F-F, open to finished size 4- Open x-bolt spacer holes to finished size as per dwg (sections D-D and E-E) ***DO NOT OPEN FWD SADDLE HOLES*** 5- Drill Aft wearplate and wearpad holes using DT9546 and DT9545 as per dwg D3905 detail G open to finished size 6- Deburr, blow out chips from inside of tube 7- Bond web in place as per Dwg D3905 & QSI 015. A/R Sikaflex-291 14138943 Sikaflex expire

date: 19-03-06 Start: 18-12-20 Time: _____ Finish: _____ Time: _____ ***** (Adhere for 12 hours)*****

190 - QC5- Inspect part completeness to step on W/O

200 - 1- Bend Fwd end of tube using bender 1 and bend prog. D3905 & Folio -04 Fwd. Use bending aid DT9544 ensure proper positioning 2- Cut Fwd end of tube as per dwg. ***VERIFY MEASUREMENT BEFORE CUTTING***

210 - 1- Buff out marks left from bending 2- Drill Fwd cap holes using DT8215. 3- Open Fwd saddle holes to finished size as per dwg 4- Drill Fwd x-bolt hole and open to finished size using DT9816 5- Drill 1.87" and 3.74 holes using DT10045 A&B locate from FWD saddle hole. (verify measurement) as per dwg. 6- Drill towing hole using DT10047 locate from FWD saddle hole and open to finished size. 7- C'sink FWD cap hole as per detail "C" 10- Deburr, blow out chips from inside of tube.

220 - QC5- Inspect part completeness to step on W/O

224 - NOTE: TACK IN 2 MOST FWD X-BOLT SPACERS AND TEST FIT FWD GROUND HANDLING FIXTURE, IF FIXTURE FITS WELL THEN PROCEED. FIXTURE DT10091. 1- Countersink x-bolt holes as per dwg 2- Remove alodine prepare for welding 3- Insert x-bolt spacers 4- Weld x-bolt spacer as per dwg A/R Alum rod Batch: 138989 5- Grind welds flush as per dwg 6- Counter bore x-bolt holes as per dwg 7- Deburr 8- Pick D2855-5 cap and transfer drill missing hole. Deburr and identify cap with skid tube batch#.

225 - QC5- Inspect part completeness to step on W/O TEST FIT USING FIXTURE DT10091.

226 - QC10- Inspect visual per QSI004- ground welds

227 - Pressure Wash per QSI005 4.3

240 - Spray Painting per QSI005 4.2 *****AS PER DEO DETAIL "F" NOTE 8, SHEET 8 MASK THIS AREA, DO NOT APPLY PRIMER OR PAINT***** PRIME AS PER DWG AND QSI 005 4.2 BATCH: 138976 PAINT WHITE AS PER DWG AND QSI 005 4.2 BATCH: 5140325

245 - QC14- Inspect Spray Paint

250 - Assemble as per dwg 1-Install inserts as per Dwg D3905.

260 - QC5- Inspect part completeness to step on W/O

270 - 1-Install wearpads, gaskets and wearplates as per Dwg D3905. Put sikaflex in insert before installing bolts and washers A/R Sikaflex-240/-291 5128396 Sikaflex expire date: 19-03 2- install plugs assembly as per dwg. 3- Inspect for foreign objects as per QSI 024 4- Install D2855-3 Cap and seal with Sikaflex. Clean excess adhesive. A/R Sikaflex-240/-291 14121396 Sikaflex expire date: 19-03 5- Install insert in D2855- Cap. Install cap and seal with Sikaflex. Clean excess adhesive. A/R Sikaflex-240/-291 14128396 Sikaflex expire date: 19-03

6- Install (2) D5101-041 and (1) D5101-047 as per dwg by using DT10117 7- INSTALL PLUGS

280 - QC5- Inspect part completeness to step on W/O

285 - Wing Walk as per dwg QSI005 4.4 Batch 14138943

286 - QC5- Inspect part completeness to step on W/O

288 - Document Control Photocopy bluefile & type labels per PPP D119-646-243 CHG 006

290 - Identify as per dwg & Stock Location: _____

300 - QC21- Final Inspection - Work Order Release

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coor. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D2500-1-190	Ext'n - I' Beam Tube 4"	1 pcs (1 ea)	90-Start up Operation	5112963
D3885-3	Float Web	1 Ea (1 ea)	180-Skidtubes	5096476
D2579	Crossbolt Spacer	2 pcs (2 ea)	224-Skidtubes	5051552
D2855-5	Cap	1 pcs (1 ea)	224-Skidtubes	5002078
D3681-1	Spacer	12 Ea (12 ea)	224-Skidtubes	5116457
D3903-1	Spacer	12 pcs (12 ea)	224-Skidtubes	5124490
ALS4-1032-130	Rivnut	10 Ea (10 ea)	250-HandFinish	5007279
ALS4-1032-225	Rivnut	1 Ea (1 ea)	270-HandFinish	5058132
AN3C46A	Bolt	4 Ea (4 ea)	270-HandFinish	5095392
AN3C50A	Bolt	4 Ea (4 ea)	270-HandFinish	5095437
AN3C5A	Bolt	12 Ea (12 ea)	270-HandFinish	5075494
AN4C46A	Bolt	3 Ea (3 ea)	270-HandFinish	5092511
D2855-3	Cap	1 pcs (1 ea)	270-HandFinish	5126403
D3411-3	Washer 5117447 (x2)	24 Ea (24 ea)	270-HandFinish	5145921(x2)
D3672-1	Washer, Phenolic	2 Ea (2 ea)	270-HandFinish	5164002
D3847-1	Wearpad	1 Ea (1 ea)	270-HandFinish	5133454
D3847-11	Wearpad	1 Ea (1 ea)	270-HandFinish	5105232
D3849-045	Aft Heavy-Duty Wearplate, Float Skid Compatible	1 Ea (1 ea)	270-HandFinish	5116933
D3849-047	Fwd Heavy-Duty Wearplate, Float Skid Compatible	1 Ea (1 ea)	270-HandFinish	X 5146137
D3904-1	Washer 5105376 (x4)	16 pcs (16 ea)	270-HandFinish	5091776(x4)
D5101-041	Crossbolt Spacer Assembly	2 Ea (2 ea)	270-HandFinish	5145321
D5101-047	Crossbolt Spacer Assembly	1 Ea (1 ea)	270-HandFinish	5103114
D5101-3	Insert	6 Ea (6 ea)	270-HandFinish	5143483
D5101-5	Insert	6 Ea (6 ea)	270-HandFinish	5143974
MS21043-3	Nut	8 Ea (8 ea)	270-HandFinish	5099569
MS21043-4	Nut	3 Ea (3 ea)	270-HandFinish	5119223
MS24694-C52	Screw	2 Ea (2 ea)	270-HandFinish	5067269
NAS1149C0332R	Washer	8 Ea (8 ea)	270-HandFinish	5124666
NAS1149D0416J	Washer	3 Ea (3 ea)	270-HandFinish	5100406
D3492-5	Plug	8 Ea (8 ea)	270-HandFinish	51375K
NAS1611-005	O-Ring	8 Ea (8 ea)	270-HandFinish	5057657

007528

007603

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D2500-1-190	1	54	0
180-Skidtubes	D3885-3	1	12	0
224-Skidtubes	D2579	2	199	0
	D2855-5	1	123	0
	D3681-1	12	132	0
	D3903-1	12	81	0
250-HandFinish	ALS4-1032-130	10	10,623	0
270-HandFinish	ALS4-1032-225	1	1,280	0
	AN3C46A	4	103	0
	AN3C50A	4	173	0
	AN3C5A	12	1,492	0
	AN4C46A	3	160	0
	D2855-3	1	51	0
	D3411-3	24	42	0
	D3492-5	8	119	0
	D3672-1	2	1,399	0
	D3847-1	1	40	0
	D3847-11	1	10	0
	D3849-045	1	2	0
	D3849-047	1	1	0
	D3904-1	16	56	0
	D5101-041	2	2	0
	D5101-047	1	4	0
	D5101-3	6	9	0
	D5101-5	6	6	0
	MS21043-3	8	866	0
	MS21043-4	3	859	0
	MS24694-C52	2	120	0
	NAS1149C0332R	8	3,012	0
	NAS1149D0416J	3	2,100	0
	NAS1611-005	8	303	0

Part Specifications

Specifications could not be found.

Plex 12/7/18 11:41 AM dart.white.jesse

Entered: _____ Date: _____

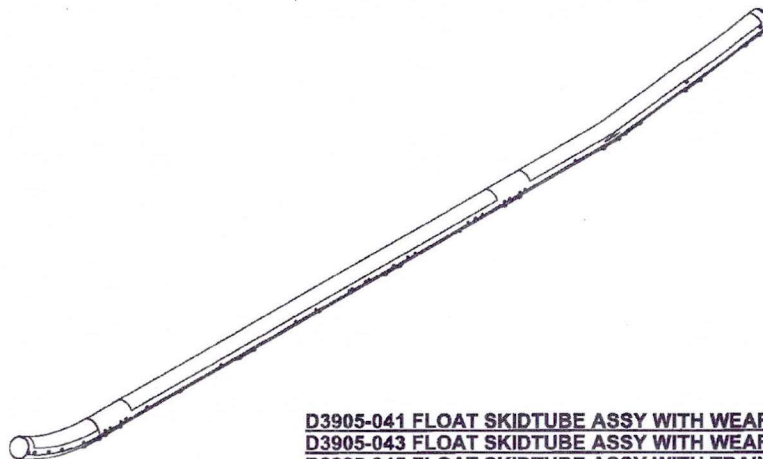


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



D3905-041 FLOAT SKIDTUBE ASSY WITH WEARPAD (SHOWN)
D3905-043 FLOAT SKIDTUBE ASSY WITH WEARPLATE (SIMILAR)
D3905-045 FLOAT SKIDTUBE ASSY WITH TRAINING WEARPLATE (SIMILAR)

RELEASED

2018 OCT 19
 ECN 18-791

APPROVED

F	ADDED WASHERS FOR AFT TRAINING WEARPLATE. D3411-3 QTY 24 WAS 18, REF CAR17-205. ADDED STRUCTURAL PROVISIONS TO ALLOW FOR THE INSTALLATION OF D119-048-313-314 SKIDTUBE PROTECTOR KIT. D3492-045 QTY 24 WAS 18 ON -041/-043. ADDED D3492-045 PLUGS TO -045. D3681-1 QTY 12 WAS 8 ON -061/-053. Ø0.313 HOLE QTY 12 WAS 8 ON -11/-13. Ø0.120 HOLE QTY 23 WAS 19 ON -3. REF NCR17-6588. FLAG NOTE 10 WAS 9 ON SHT 2 & 3. REF PART 5-421	ZF	18.08.16
E	COMPLETE REDRAW SEE PREVIOUS REV. AFT FLOAT HOLE NOW Ø0.465 WAS Ø0.437. FINISH REMOVED FROM SADDLE AREA SEE DETAIL F. REF PART 5-421 CHANGE QTY OF D2855-3. ADDED D2855-5 CAP ASSEMBLIES. ADDED INSTRUCTIONS TO LOCATE INSERT HOLE FOR D2855-5 CAP. REF PART 17-583 ADDED DRILL JIG REF NUMBER. NCR15-5368 INCREASE RIDGE RELIEF FROM 0.080 TO 0.130. REF PART 17-574	AJS / WK	17.03.13
D	REVISED DIMENSIONS AND PROVIDED TOLERANCE TO SKIDTUBE OVERALL LENGTH PAGE 5-6 REVISED NOTE 2 AND NOTE 7 PAGE 1 (ZN B8- ZN A8-1) REVISED -041/-043/-045 DRAWING VIEWS. REVISED SECTION VIEW F-F (ZN B4-7). REVISED BOM REF. PART 13-299 AND PART 13-272	AK	14.08.08
C	(SHT 1 PL. ZN C2-2, C2-3, C2-4) ITEM 13, QTY 2 WAS 4. ITEM 42 AND 45, QTY 44 WAS 48. ADD ITEM 48, MS24694- C52 WAS ANSC5A. D3672-1 AND NAS1149C0332R. (ZN C7-7) Ø0.201 CSK Ø0.385 X 1.00" WAS Ø0.204 THRU. (ZN A4-5, A4-6) ADD RELIEF INSTRUCTION. ADD ITEM 10, CROSS BOLT SPACER (ZN D4-1, C6-7, D6-7)	DB	13.02.21
B	REVISED PART LIST. ALS4-1032-130 WAS AELS-1032-130 (ZN A6-5, A5-6, C5-7, C3-7, A5-7). ADD DT8932 (ZN A8-1). D2855-3 WAS D2575 (ZN C8-2, C1-2, C8-3, C1-3, C8-4, C1-4). AN305A WAS AN30CA (ZN C7-2, C1-2, C7-3, C1-3, C7-4, C1-4). D3849-047 WAS D3849-041 (ZN B3-4). ADD D3411-3 (ZN B3-4). ADD AN305A (ZN B3-4). Ø0.313 WAS Ø0.328 (B2-5, B2-6, C2-7, A8-7 & D7-8). REVISED NOTE IV (ZN A8-7)	RF	09.06.30
A	NEW ISSUE	RF	09.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	AJS	DART AEROSPACE USA, INC.	
DRAWN	ZF	EUGENE, OR	
CHECKED	MW	DRAWING NO.	REV. F
MFG. APPR.	DD	D3905	SHEET 1 OF 14
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY	NTS
DATE	18.08.16	COPYRIGHT © 2009 BY DART AEROSPACE USA, INC.	

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Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

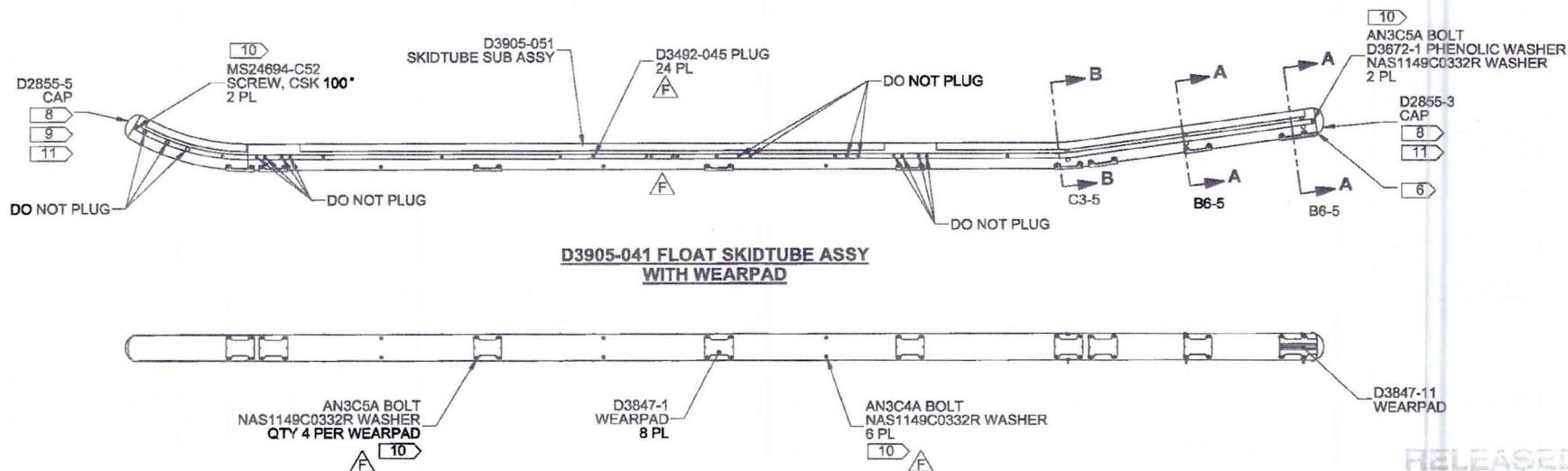
NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

ITEM	QTY -041	P/N	DESCRIPTION
	X	D3905-041	SKIDTUBE ASSY
1	1	D2855-3	CAP
2	1	D2855-5	CAP
3	24	D3492-045	PLUG
4	2	D3672-1	PHENOLIC WASHER
5	8	D3847-1	WEARPAD
6	1	D3847-11	WEARPAD
7	1	D3905-051	SKIDTUBE SUB ASSEMBLY
8	2	D5101-041	CROSSBOLT SPACER ASSY
9	1	D5101-047	CROSSBOLT SPACER ASSY
10	6	D5101-3	INSERT
11	6	D5101-5	INSERT

ITEM	QTY -041	P/N	DESCRIPTION
12	1	ALS4-1032-225	INSERT
13	6	AN3C4A	BOLT
14	38	AN3C5A	BOLT
15	3	AN4C46A	BOLT
16	3	MS21043-4	NUT, SELF-LOCKING
17	2	MS24694-C52	SCREW, CSK 100°
18	44	NAS1149C0332R	WASHER
19	6	NAS1149C0416R	WASHER



NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3905-041" AND BATCH NUMBER PER QSI 044 6.4 ON THE ID OF THE TUBE, BEFORE INSTALLING THE AFT D2855-3 CAP
- 7) WEIGHT: 35.4 lbs
- 8) RELIEVE INNER RIDGE OF EXTRUSION, AS NEEDED, TO ALLOW FOR INSTALLATION OF D2855-3 AND D2855-5 CAP ASSY, ALODINE BARE MATERIAL
- 9) USE D3905-051 SKIDTUBE ASSY TO LOCATE AND BACKDRILL UNDRILLED INSERT HOLE INTO D2855-5 CAP, OPEN HOLE TO $\varnothing 0.297$, ALODINE BARE MATERIAL AND INSTALL ALS4-1032-225 (OR AKS7-1032-225, OR ALS7-1032-225, OR AKS4-1032-225) INSERT ON INSIDE OF CAP.
- 10) SEAL FASTENERS WITH SIKAFLEX -241/-291 OR PROSEAL 890 OR MIL-S-8802 CLASS B2 SEALANT
- 11) SEAL MATING SURFACES WITH SIKAFLEX -241/291 OR PROSEAL 890 OR MIL-S-8802 CLASS B2 SEALANT

APPROVED

DESIGN	AJS	DART AEROSPACE USA, INC.	
DRAWN	ZF	EUGENE, OR	
CHECKED	MW	DRAWING NO.	REV. F
MFG. APPR.	DD	D3905	SHEET 2 OF 14
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	# A119 FLOAT SKIDTUBE ASSY	NTS
DATE	18.08.16	COPYRIGHT © 2009 BY DART AEROSPACE USA, INC.	
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2018 OCT 19

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

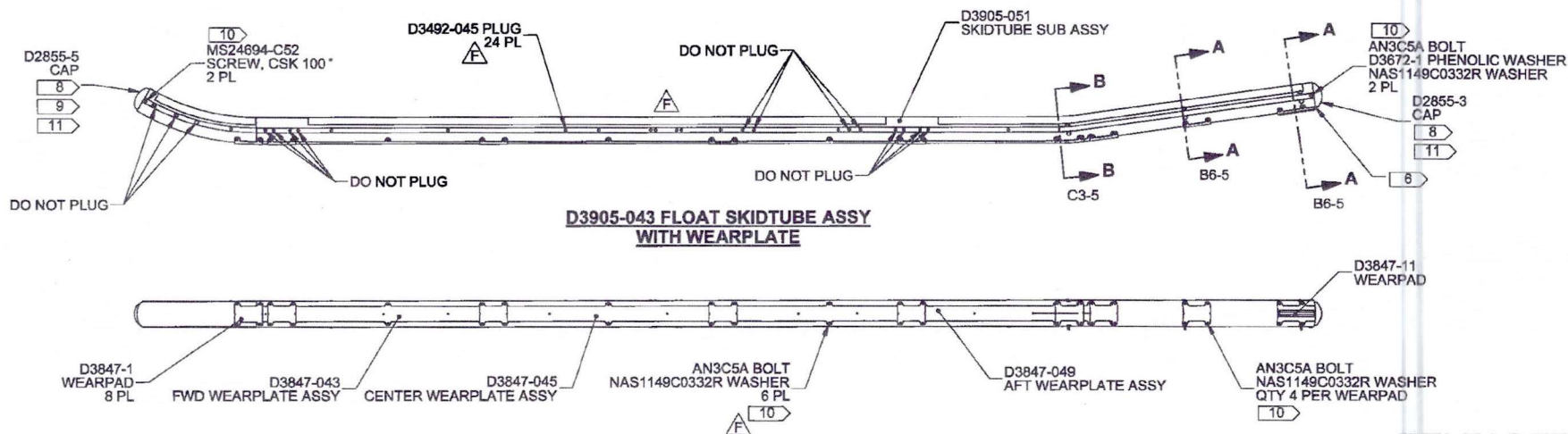
NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

ITEM	QTY -043	P/N	DESCRIPTION
	X	D3905-043	FLOAT SKIDTUBE ASSY
1	1	D2855-3	CAP
2	1	D2855-5	CAP
3	24	D3492-045	PLUG
4	2	D3672-1	PHENOLIC WASHER
5	1	D3847-043	FWD WEARPLATE ASSY
6	1	D3847-045	CENTER WEARPLATE ASSY
7	1	D3847-049	AFT WEARPLATE ASSY
8	8	D3847-1	WEARPAD
9	1	D3847-11	WEARPAD
10	1	D3905-051	SKIDTUBE SUB ASSEMBLY
11	2	D5101-041	CROSSBOLT SPACER ASSY
12	1	D5101-047	CROSSBOLT SPACER ASSY
13	6	D5101-3	INSERT
14	6	D5101-5	INSERT

ITEM	QTY -043	P/N	DESCRIPTION
15	1	ALS4-1032-225	INSERT
16	44	AN3C5A	BOLT
17	3	AN4C46A	BOLT
18	3	MS21043-4	NUT, SELF-LOCKING
19	2	MS24694-C52	SCREW, CSK 100"
20	44	NAS1149C0332R	WASHER
21	6	NAS1149C0416R	WASHER



NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3905-043" AND BATCH NUMBER PER QSI 044 6.4 ON THE ID OF THE TUBE, BEFORE INSTALLING THE AFT D2855-3 CAP
- 7) WEIGHT: 42.8 lbs
- 8) RELIEVE INNER RIDGE OF EXTRUSION, AS NEEDED, TO ALLOW FOR INSTALLATION OF D2855-3 AND D2855-5 CAP ASSY, ALODINE BARE MATERIAL
- 9) USE D3905-051 SKIDTUBE ASSY TO LOCATE AND BACKDRILL UNDRILLED INSERT HOLE INTO D2855-5 CAP, OPEN HOLE TO $\varnothing 0.297$, ALODINE BARE MATERIAL AND INSTALL ALS4-1032-225 (OR AKS7-1032-225, OR ALS7-1032-225, OR AKS4-1032-225) INSERT ON INSIDE OF CAP.
- 10) SEAL FASTENERS WITH SIKAFLEX -241/-291 OR PROSEAL 890 OR MIL-S-8802 CLASS B2 SEALANT
- 11) SEAL MATING SURFACES WITH SIKAFLEX -241/291 OR PROSEAL 890 OR MIL-S-8802 CLASS B2 SEALANT

APPROVED

DESIGN	AJS	DART AEROSPACE USA, INC.	
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CHECKED	MW	DRAWING NO.	REV. F
MFG. APPR.	DD	D3905	SHEET 3 OF 14
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY NTS	
DATE	18.08.16	COPYRIGHT © 2009 BY DART AEROSPACE USA, INC.	

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2018 OCT 19

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

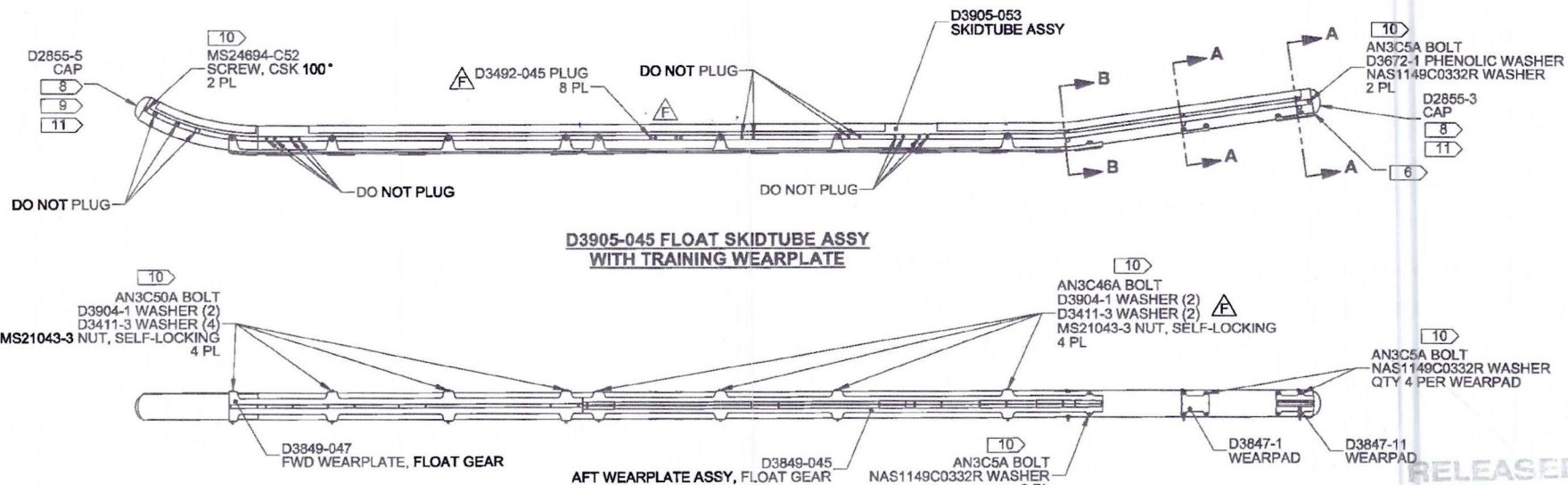
NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up			
Other/Details: _____					

ITEM	QTY -045	P/N	DESCRIPTION
	X	D3905-045	FLOAT SKIDTUBE ASSY
1	1	D2855-3	CAP
2	1	D2855-5	CAP
3	24	D3411-3	WASHER
4	2	D3672-1	PHENOLIC WASHER
5	1	D3847-1	WEARPAD
6	1	D3847-11	WEARPAD
7	1	D3849-045	AFT WEARPLATE ASSY, FLOAT GEAR
8	1	D3849-047	FWD WEARPLATE, FLOAT GEAR
9	16	D3904-1	WASHER
10	1	D3905-053	SKIDTUBE SUB ASSEMBLY
11	2	D5101-041	CROSSBOLT SPACER ASSY
12	1	D5101-047	CROSS BOLT SPACER
13	6	D5101-3	INSERT
14	6	D5101-5	INSERT

ITEM	QTY -045	P/N	DESCRIPTION
15	1	ALS4-1032-225	INSERT
16	12	AN3C5A	BOLT
17	4	AN3C46A	BOLT
18	4	AN3C50A	BOLT
19	3	AN4C46A	BOLT
20	8	MS21043-3	NUT, SELF-LOCKING
21	3	MS21043-4	NUT, SELF-LOCKING
22	2	MS24694-C52	SCREW, CSK 100°
15	12	NAS1149C0332R	WASHER
24	6	NAS1149D0416J	WASHER
25	8	D3492-045	PLUG



NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3905-045" AND BATCH NUMBER PER QSI 044 6.4 ON THE ID OF THE TUBE, BEFORE INSTALLING THE AFT D2855-3 CAP
- 7) WEIGHT: 48.0 lbs
- 8) RELIEVE INNER RIDGE OF EXTRUSION, AS NEEDED, TO ALLOW FOR INSTALLATION OF D2855-3 AND D2855-5 CAP ASSY, ALODINE BARE MATERIAL
- 9) USE D3905-053 SKIDTUBE ASSY TO LOCATE AND BACKDRILL UNDRILLED INSERT HOLE INTO D2855-5 CAP, OPEN HOLE TO $\varnothing 0.297$, ALODINE BARE MATERIAL AND INSTALL ALS4-1032-225 (OR AKS7-1032-225, OR ALS7-1032-225, OR AKS4-1032-225) INSERT ON INSIDE OF CAP.
- 10) SEAL FASTENERS WITH SIKAFLEX -241-/291 OR PROSEAL 890 OR MIL-S-8802 CLASS B2 SEALANT
- 11) SEAL MATING SURFACES WITH SIKAFLEX -241-/291 OR PROSEAL 890 OR MIL-S-8802 CLASS B2 SEALANT

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DESIGN	AJS	DART AEROSPACE USA, INC.	
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CHECKED	MW	DRAWING NO.	REV. F
MFG. APPR.	DD	D3905	SHEET 4 OF 14
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY NTS	
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WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By Lead hand / Supervisor QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
		Other/Details:			

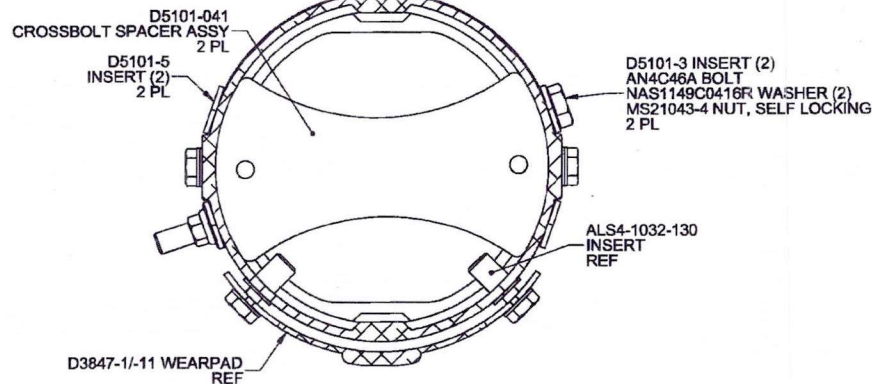
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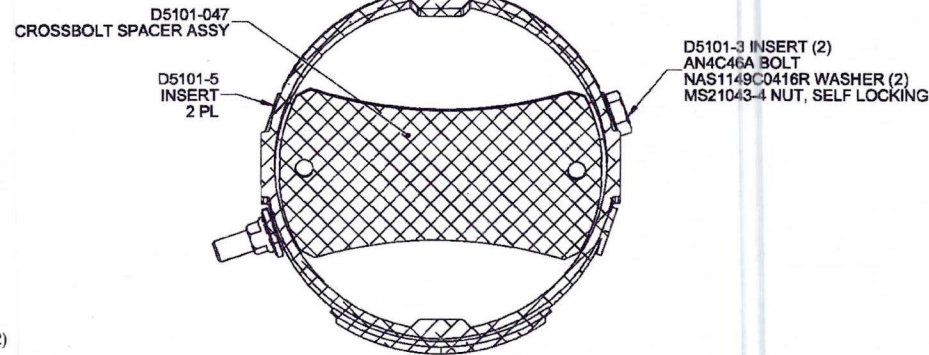
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B

A



SECTION A-A
SCALE: 12X



SECTION B-B
SCALE 12X

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2018 OCT 13 4

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MFG. APPR.	DD	D3905	SHEET 5 OF 14
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY	NTS
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8 7 6 5 4 3 2 1

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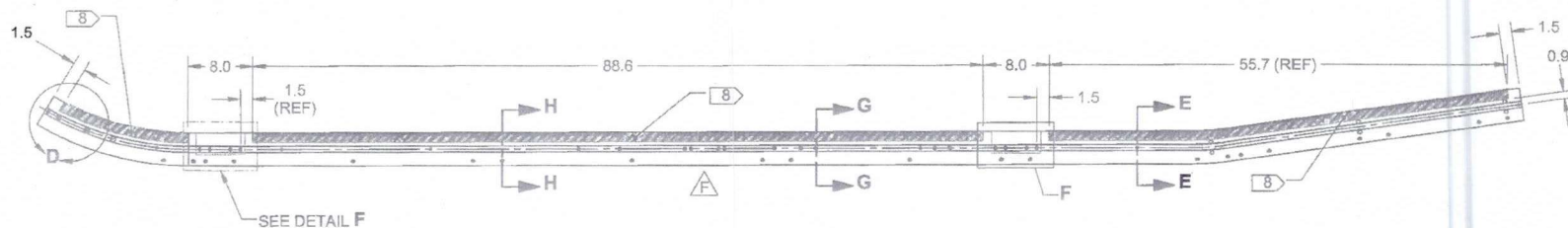
WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

ITEM	QTY -051	P/N	DESCRIPTION
	X	D3905-051	SKIDTUBE SUB ASSY
1	2	D2579	CROSS BOLT SPACER
2	12	D3681-1	SPACER
3	12	D3903-1	SPACER
4	1	D3905-061	SKIDTUBE SUB ASSEMBLY
5	42	ALS4-1032-130	INSERT



D3905-051 SKIDTUBE SUB ASSEMBLY

RELEASED
2018 OCT 19

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: PRIME (REF 4.2.1.3.3) AND PAINT WHITE PER DART QSI 005 4.2.2.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY AT NEXT ASSEMBLY
- 7) WEIGHT: N/A
- 8) AFTER APPLICATION OF FINISH, PAINT TOP SURFACE OF SKIDTUBE WITH MIL-W-5044 ANTI-SKID PAINT (WING WALK) AS INDICATED TO 0.50" ABOVE LOCATION RIDGE, PER QSI 005 SECTION 4.4

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DESIGN	AJS	DART AEROSPACE USA, INC.	
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CHECKED	MW	DRAWING NO.	REV. F
MFG. APPR.	DD	D3905	SHEET 6 OF 14
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY	NTS
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Entered: _____ Date: _____



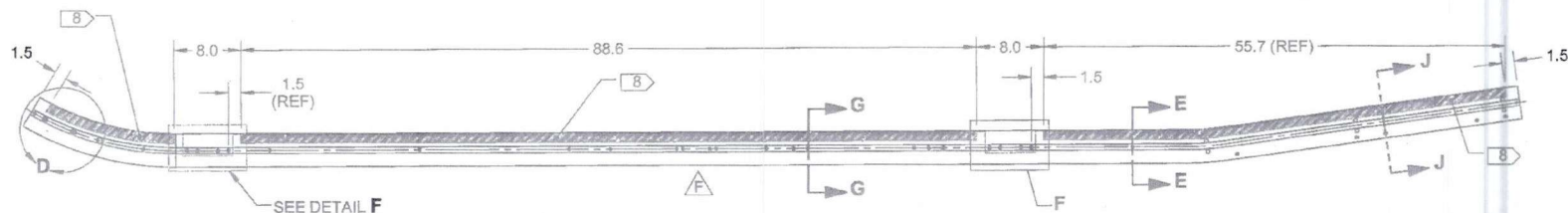
WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

ITEM	QTY -053	P/N	DESCRIPTION
	X	D3905-053	SKIDTUBE SUB ASSY
1	2	D2579	CROSS BOLT SPACER
2	12	D3681-1	SPACER
3	12	D3903-1	SPACER
4	1	D3905-063	SKIDTUBE SUB ASSEMBLY
5	10	ALS4-1032-130	INSERT



D3905-053 SKIDTUBE SUB ASSEMBLY

RELEASED
2015 OCT 19

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: PRIME (REF 4.2.1.3.3) AND PAINT WHITE PER DART QSI 005 4.2.2.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY AT NEXT ASSEMBLY
- 7) WEIGHT: N/A
- 8) AFTER APPLICATION OF FINISH, PAINT TOP SURFACE OF SKIDTUBE WITH MIL-W-5044 ANTI-SKID PAINT (WING WALK) AS INDICATED TO 0.50" ABOVE LOCATION RIDGE, PER QSI 005 SECTION 4.4

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DESIGN	AJS	DART AEROSPACE USA, INC.	
DRAWN	ZF	EUGENE, OR	
CHECKED	MW	DRAWING NO.	REV. F
MFG. APPR.	DD	D3905	SHEET 7 OF 14
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY	NTS
DATE	18.08.16	COPYRIGHT © 2015 BY DART AEROSPACE USA, INC.	

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Other/Details: _____		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up			

8

7

6

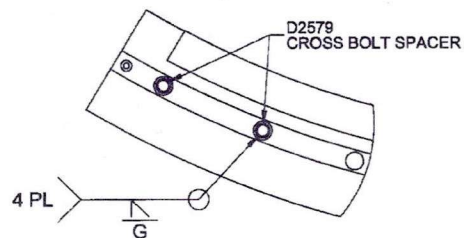
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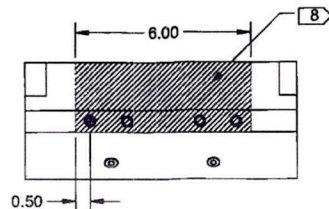
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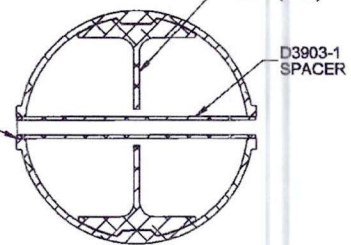
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DETAIL F
SCALE: 3.5X

2 PL

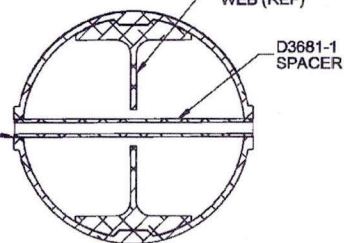
G



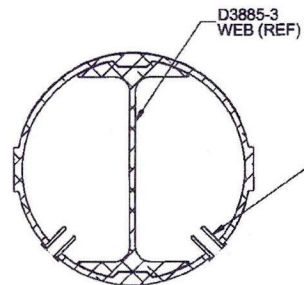
SECTION G-G
SCALE: 7X
12 PL

2 PL

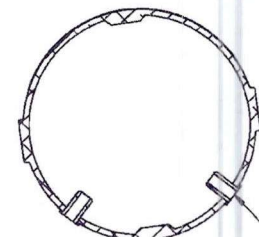
G



SECTION E-E
SCALE: 7X
12 PL



SECTION H-H
SCALE: 7X
D3905-51 21 PL



SECTION J-J
SCALE: 7X
D3905-53 5 PL

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: PRIME (REF 4.2.1.3.3) AND PAINT WHITE PER DART QSI 005 4.2.2.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY AT FINAL ASSEMBLY
- 7) WEIGHT: N/A
- 8) MASK THIS AREA AND DO NOT APPLY PRIMER OR PAINT
- 9) AFTER DRILLING AND BENDING ASSEMBLY, PERFORM THE FOLLOWING FOR THE SECTION G-G $\phi 0.375$ HOLES ONLY:
 - i) CHAMFER HOLES $\phi 0.475 \times 45^\circ$
 - ii) INSERT D3903-1 SPACER
 - iii) WELD INTO PLACE AND GRIND FLUSH
 - iv) C'BORE TO $\phi 0.313 \times 0.75$ DEEP
 - v) DEBURR HOLES
- 10) AFTER DRILLING AND BENDING ASSEMBLY, PERFORM THE FOLLOWING FOR THE SECTION E-E $\phi 0.313$ HOLES ONLY:
 - i) CHAMFER HOLES $\phi 0.354 \times 45^\circ$ OR 0.050 DEEP $\times 45^\circ$ (BOTH SIDES)
 - ii) INSERT D3681-1 SPACER
 - iii) WELD INTO PLACE AND GRIND FLUSH
 - iv) DEBURR HOLES
- 11) WELD PER DART QSI 004

RELEASED

OCT 19 40

APPROVED

DESIGN	AJS	DART AEROSPACE USA, INC.	
DRAWN	ZF	EUGENE, OR	
CHECKED	MW	DRAWING NO.	REV. F
MFG. APPR.	DD	D3905	SHEET 8 OF 14
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY	NTS
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8

7

6

5

4

3

2

1

Entered: _____ Date: _____



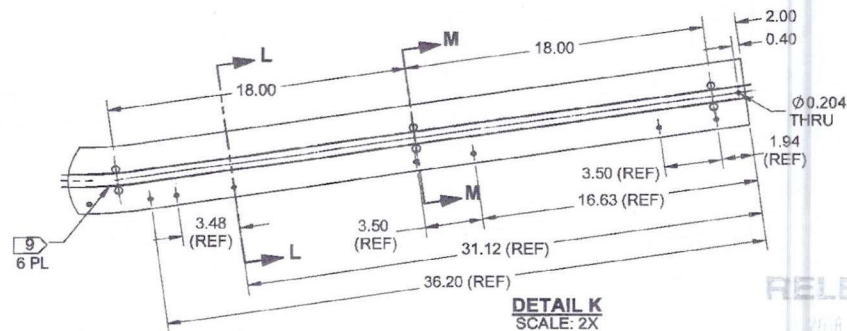
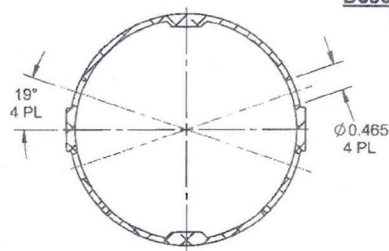
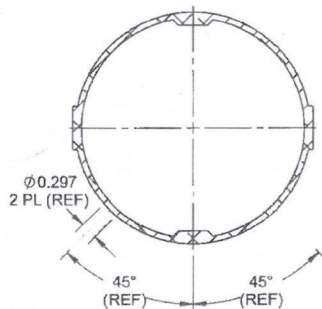
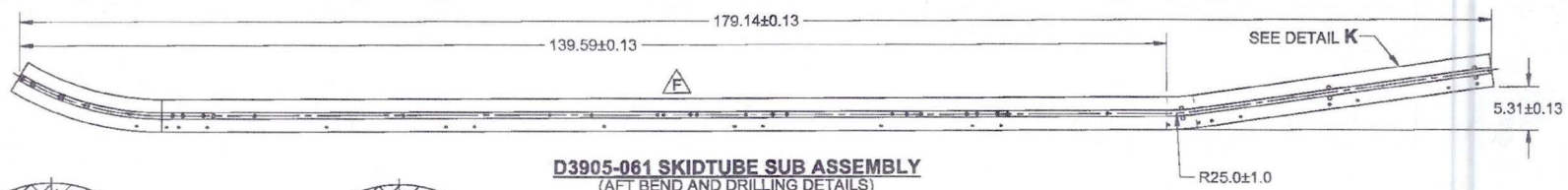
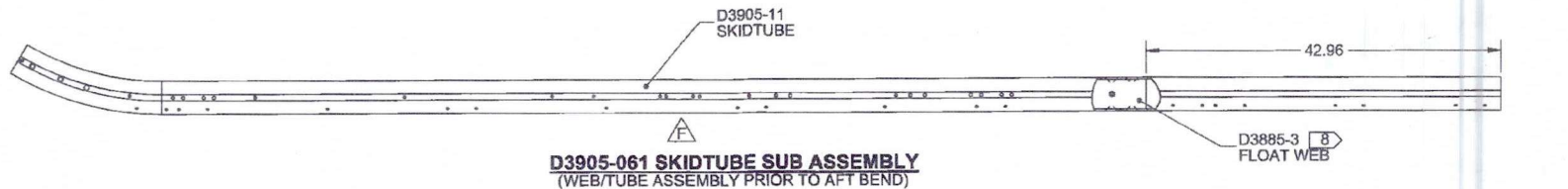
WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread ☐			
Other/Details:					

ITEM	QTY	P/N	DESCRIPTION
	X	D3905-061	SKIDTUBE SUB ASSEMBLY
1	1	D3885-3	FLOAT WEB
2	1	D3906-11	SKIDTUBE



NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY AT FINAL ASSEMBLY
- 7) WEIGHT: N/A
- 8) INSERT D3885-3 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/291 ADHESIVE PER DART QSI 015 AFTER BENDING. ENSURE HOLES LINE-UP
- 9) RELIEVE RIDGE FLUSH WITH SKIDTUBE FOR INSERT CLEARANCE, MAX 0.130 INTO RIDGE

APPROVED

DESIGN	AJS	DART AEROSPACE USA, INC.	
DRAWN	ZF	EUGENE, OR	
CHECKED	MW	DRAWING NO.	REV. F
MFG. APPR.	DD	D3905	SHEET 9 OF 14
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY	
DATE	18.08.16	NTS	

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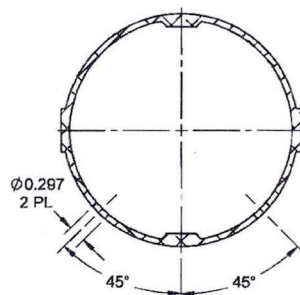
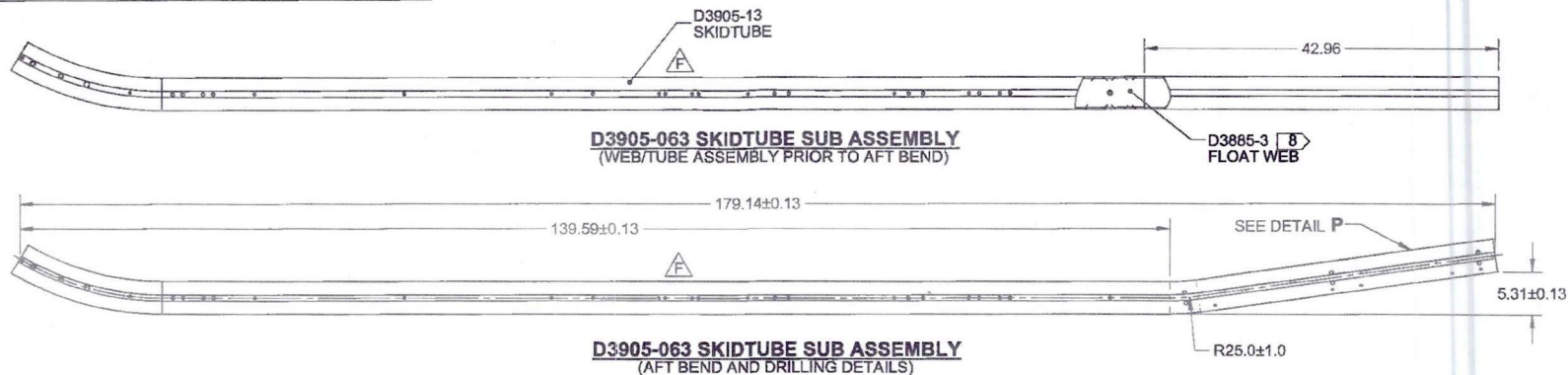
WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

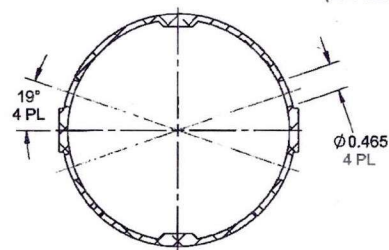
Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

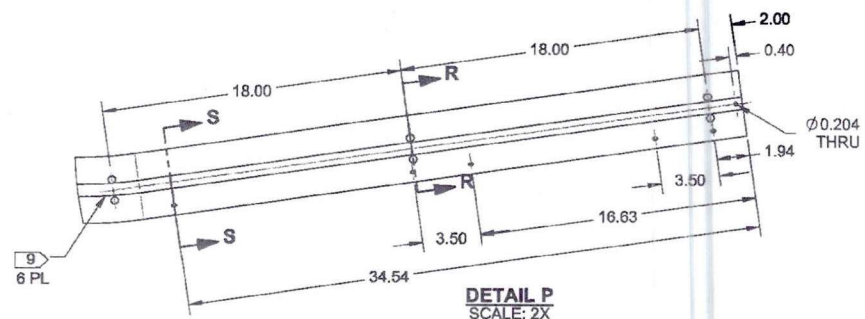
ITEM	QTY -063	P/N	DESCRIPTION
	X	D3905-063	SKIDTUBE SUB ASSEMBLY
1	1	D3885-3	FLOAT WEB
2	1	D3905-13	SKIDTUBE



SECTION S-S
5 PL
SCALE: 7X



SECTION R-R
3 PL
SCALE: 7X



RELEASED

2013 OCT 13

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY AT FINAL ASSEMBLY
- 7) WEIGHT: N/A
- 8) INSERT D3885-3 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH SIKAFLEX-2411-291 ADHESIVE PER DART QSI 015 AFTER BENDING. ENSURE HOLES LINE-UP
- 9) RELIEVE RIDGE FLUSH WITH SKIDTUBE FOR INSERT CLEARANCE, MAX 0.130 INTO RIDGE

DESIGN	AJS	DART AEROSPACE USA, INC.	
DRAWN	ZF	EUGENE, OR	
CHECKED	MW	DRAWING NO.	REV. F
MFG. APPR.	DD	D3905	SHEET 10 OF 14
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY	NTS
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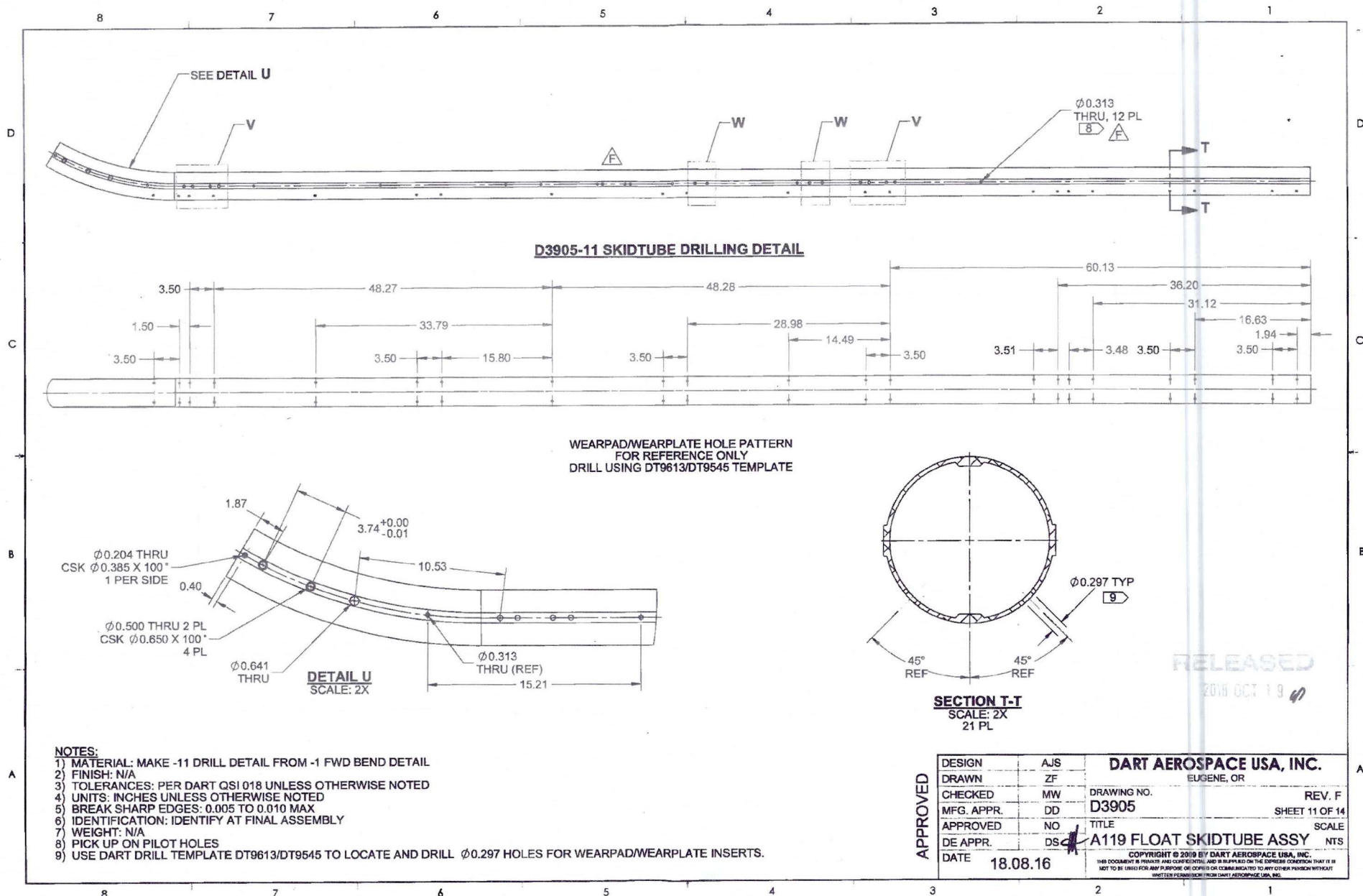


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



Entered: _____ Date: _____

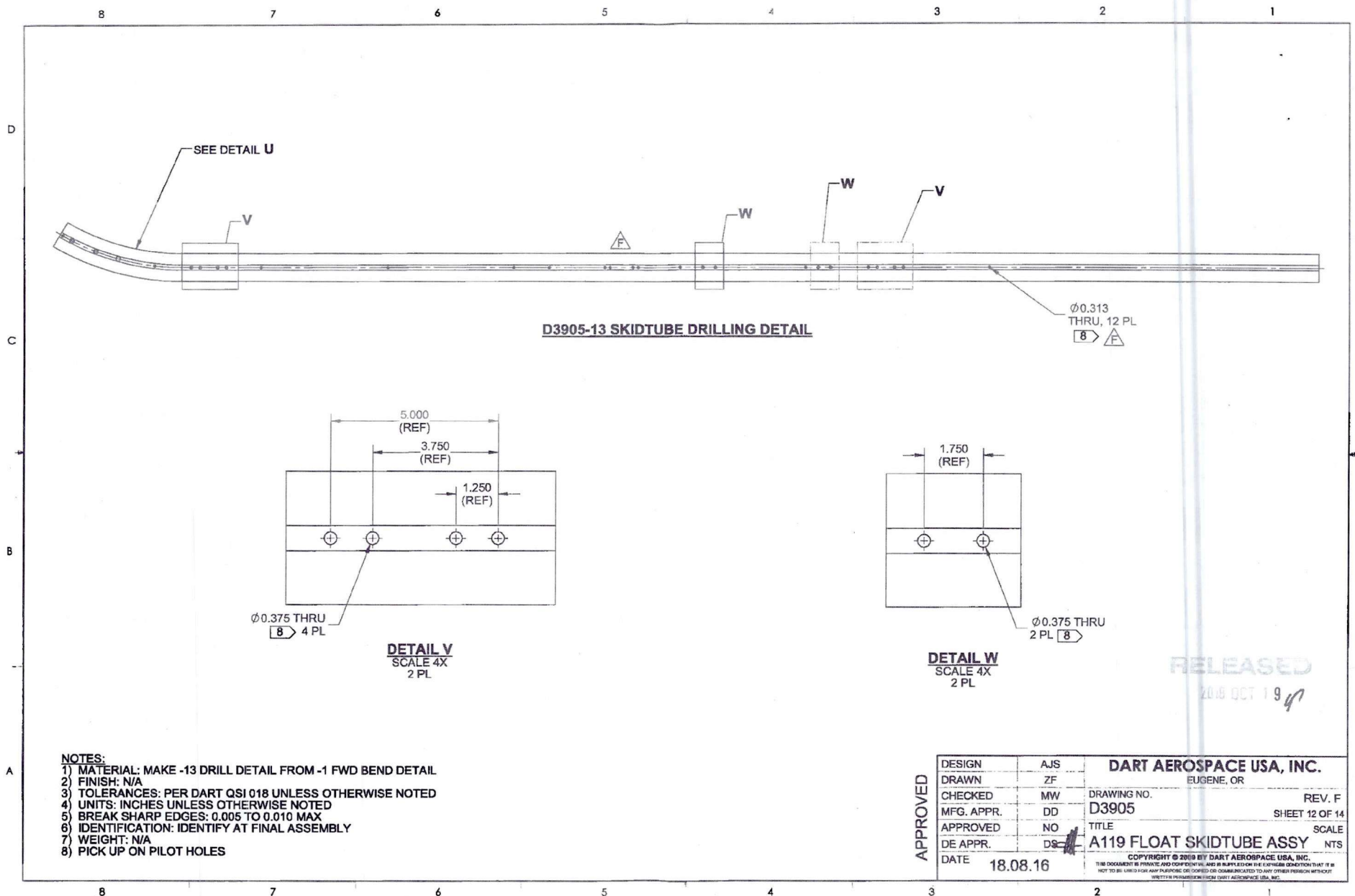


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



Entered: _____ Date: _____

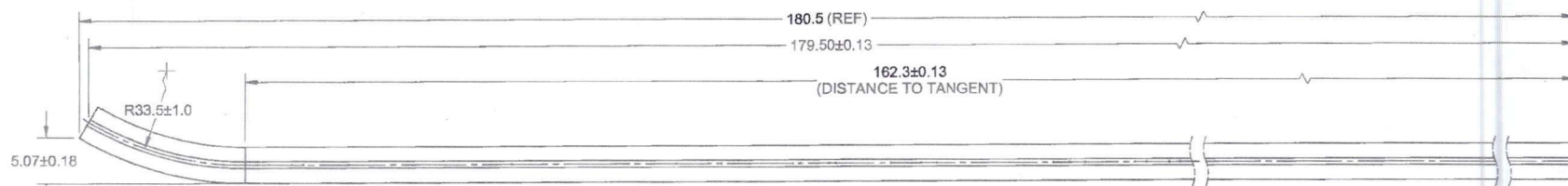


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



D3905-1 SKIDTUBE FWD BEND DETAIL

RELEASED
2018 OCT 19

NOTES:

- 1) MATERIAL: MAKE -1 FWD BEND DETAIL FROM -3 PILOT HOLE DETAIL
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY AT FINAL ASSEMBLY
- 7) WEIGHT: N/A
- 8) DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 8.5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP 0.020" DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.

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DESIGN	AJS	DART AEROSPACE USA, INC.	
DRAWN	ZF	EUGENE, OR	
CHECKED	MW	DRAWING NO.	REV. F
MFG. APPR.	DD	D3905	SHEET 13 OF 14
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY	NTS
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Entered: _____ Date: _____

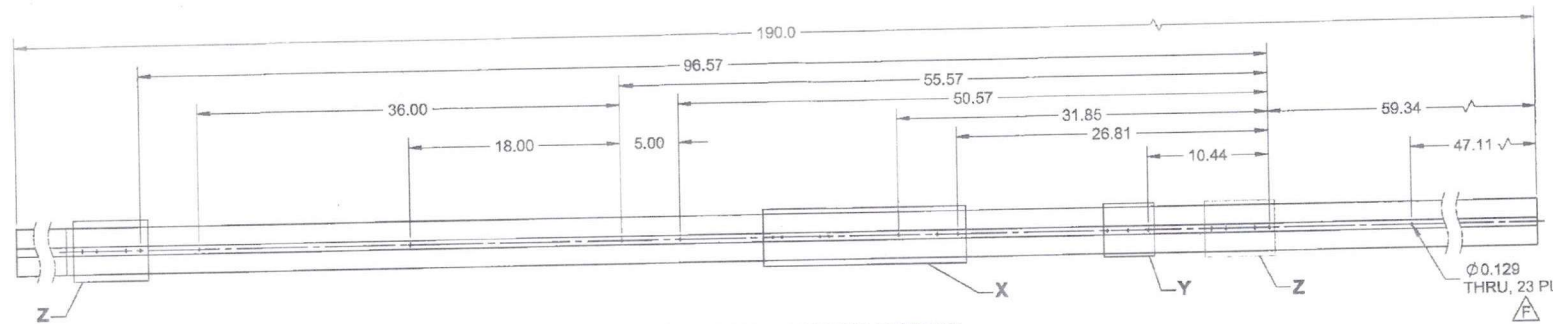


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

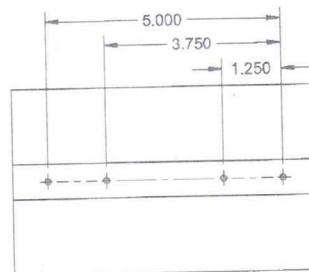
NCR No. _____

Route update only ☐

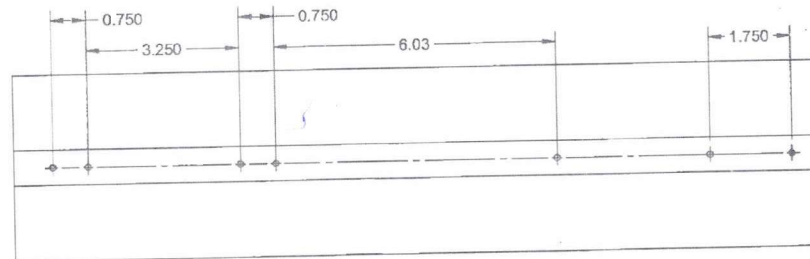
Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



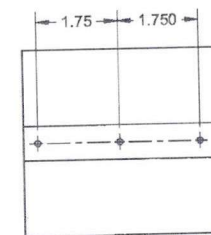
D3905-3 SKIDTUBE PILOT HOLE DETAIL



DETAIL Z
SCALE: 4X



DETAIL X
SCALE: 4X



DETAIL Y
SCALE: 4X

NOTES:

- 1) MATERIAL: MAKE FROM D2500-1-190 EXTRUSION
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY AT FINAL ASSEMBLY
- 7) WEIGHT: N/A

RELEASED
OCT 19 1994

APPROVED

DESIGN	AJS	DART AEROSPACE USA, INC.	
		EUGENE, OR	
DRAWN	ZF	DRAWING NO.	REV. F
CHECKED	MW	D3905	SHEET 14 OF 14
MFG. APPR.	DD	TITLE	
APPROVED	NO	A119 FLOAT SKIDTUBE ASSY	
DE APPR.	DS	SCALE	
DATE	18.08.16	NTS	

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Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No.

Route update only

Job: _____ Part No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐		DEPARTMENT/PROCESS Skid-tube ☐ Cross tube ☐ Eng. (Non-AW) ☐ Engineering ☐ Machining ☐ Small Fab ☐ Prod. Eng. Coord. ☐ Water Jet ☐ Large Fab ☐ Finishing ☐ Rec/Store/Packaging ☐ Supplier ☐ Quality ☐							
Date :		Sequence #:		QTY Affected :				MRB (QSI042)			
Description Work Order Deviation				Disposition				Completed By			
								Lead hand / Supervisor			
										QC / QA Coordinator	
Root Cause				FAULT CATEGORY							
Operator ☐				☐ Pressure/Forced		☐ Contamination		☐ Power Loss/Surge		☐ Positioned Wrong	
Manufacturing Process ☐				☐ Bending		☐ Misaligned/off center		☐ Folio/Program		☐ Outside Tolerance	
Equip/Tooling ☐				☐ Crushing		☐ BOM/Route		☐ Grain Direction		☐ Drawing	
Handling/Presservation ☐				☐ Cracks		☐ Broken/Damage/Defect		☐ Weld		☐ Finish	
Material ☐				☐ Crimp/Kink/Ripple/Wave/Twist		☐ Incomplete/Unclear Instructions		☐ Wrong Stock Pulled		☐ Part Lost/Missing	
Product Improvement ☐				☐ Marks/Chatter		☐ Drill Holes		☐ Out of Sequence		☐ Misread	
Process Improvement ☐				☐ Mislabeled		☐ Fit/Function		☐ Off-set/Set-up			
Human Factors ☐				Other/Details:							